

02/17/72

February 17, 1972

To: Chief-Engineering
From: Air Pollution Engineer - Roberts
Subject: Visit to Rock Crushers at Lockheed, Pioneer and
Glacier Rock Quarries

Vick Prodehl and I visited Lockheed Riverton Quarry, Pioneer Sand and Gravel, and Glacier Sand & Gravel Rock quarries. All three plants have 3 stage crushing. Martin Green of Lockheed Riverton Quarry showed us the latest improvements he has made on his plant. At the present time there are only small puffs of dust coming from his jaw crusher and final screens. He agrees that it is possible to design a rock crushing plant such that there would be no visible emissions. He uses both baghouse and detergent spray control. Even though the detergent spray cuts by half the amount of water required, and costs much less, he still favors the baghouse. He spent \$15,000 on his baghouse and only a few hundred dollars on his detergent spray system. However, during the cold weather he had considerable problems with his detergent spray water lines freezing. He asked for Notice of Construction forms to be sent to him for a new plant which he is planning which will have a higher degree of control than his present plant.

Pioneer Sand & Gravel, near Steilacoom has a very modern automated plant which can process 250 tons per hour and be operated by two men. The 20 men who maintain the plant work days and the two men who operate the plant work from 4:00 p.m. to 12:00 p.m. Mr. Kimery, plant manager, indicates that the company would go to a baghouse if they had neighbors that were close. They use the Johnson-Marsh spray control system on this isolated plant. Although the plant was not in operation when we visited, the operating personnel indicated that there were some visible emissions from screening, and the fines pile when the wind blows.

Mr. Bud Larson of Glacier Sand & Gravel showed us the water sprays on their crushers. The Glacier plant rock crushing system is smaller and older than Pioneer Sand & Gravel plant. Their system of dust control is homemade and low cost, consisting mostly of garden hoses, spray nozzles and homemade spray bars. There was a medium amount of dust coming from the final screens.



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Arnie Brannock, who accompanied Mr. Prodehl and myself to the Glacier and Pioneer plants, asked Mr. Larson what he would do if he were faced with the requirement to control his emissions from his crushers, screens and piles. Mr. Larson replied that he would do what he had to. He would probably propose a system similar to what their company has at a plant near Scappoose, Oregon. They have the Johnson-Marsh detergent spray system there. He indicated his company was hard up for money but they would make an effort to cooperate with our Agency. Arnie indicated that he would pay both Pioneer and Glacier pits a visit when the weather was dryer.

Vick Prodehl indicated that he has prepared a preliminary guideline for control of emissions from rock quarries but that he will not send it out until he has had an opportunity to review it with members of the industry in his area. The primary reason that he came to Seattle was to get added information before meeting with industry this week. He believes, and there is good evidence to support him, that new plants can operate with essentially no visible emissions from rock processing. He has one plant in which they have built a building around the rock crusher to reduce both air pollution and noise. The vent on top of the building has a visible plume and he will recommend that a baghouse be installed. He believes that the smaller temporary plants should be required to use some type of detergent spray which would allow them to control dust without having to add enough water to clog up the final screens. The large permanent plants would be required to use some system to eliminate all visible emissions. He believes that it would be desirable to have rock processing control guidelines adopted for the states of Oregon and Washington, similar to the incinerator standards.

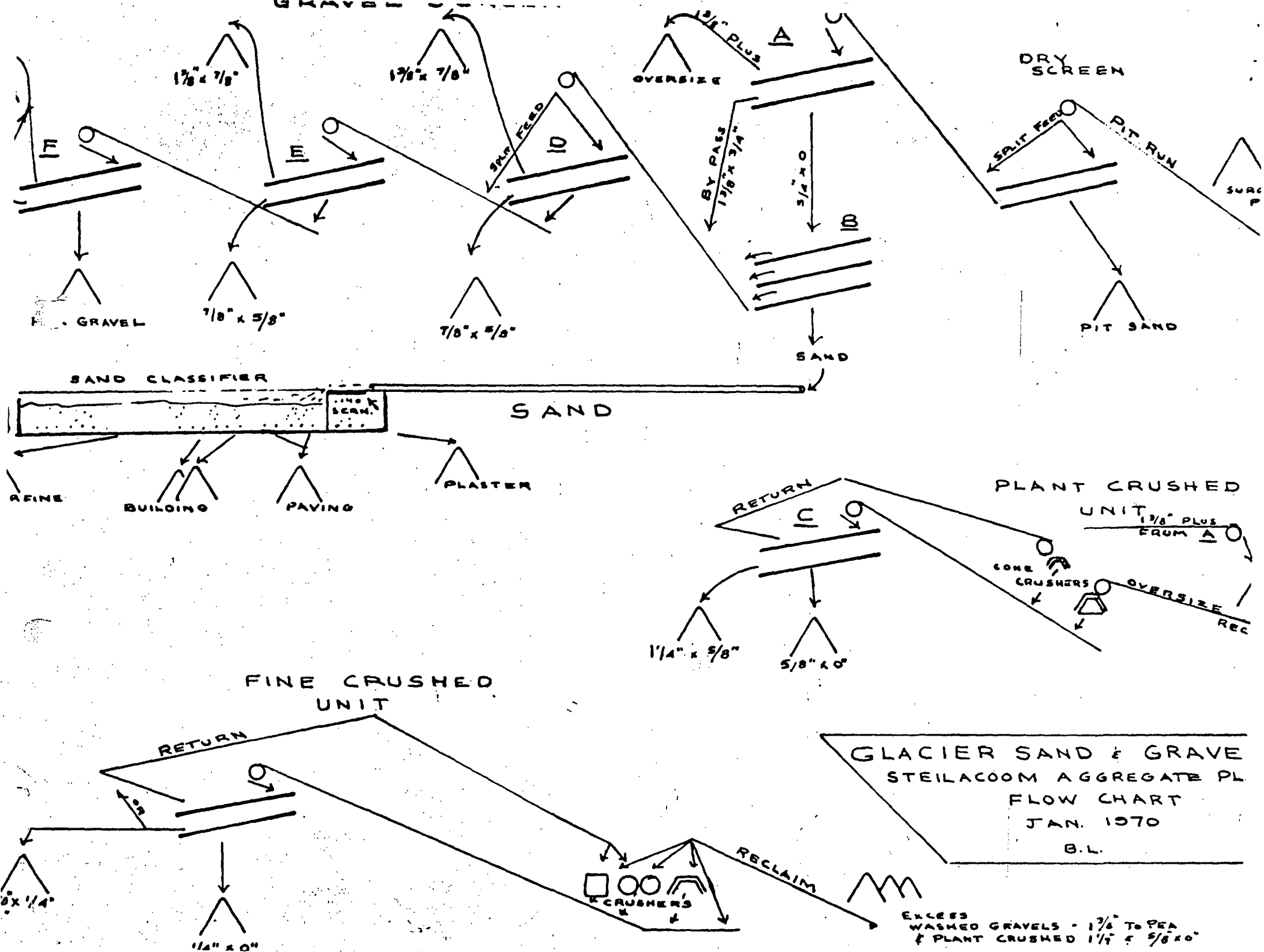
Flow diagrams for Pioneer and Glacier are attached.

J. W. Roberts

JWR:hf

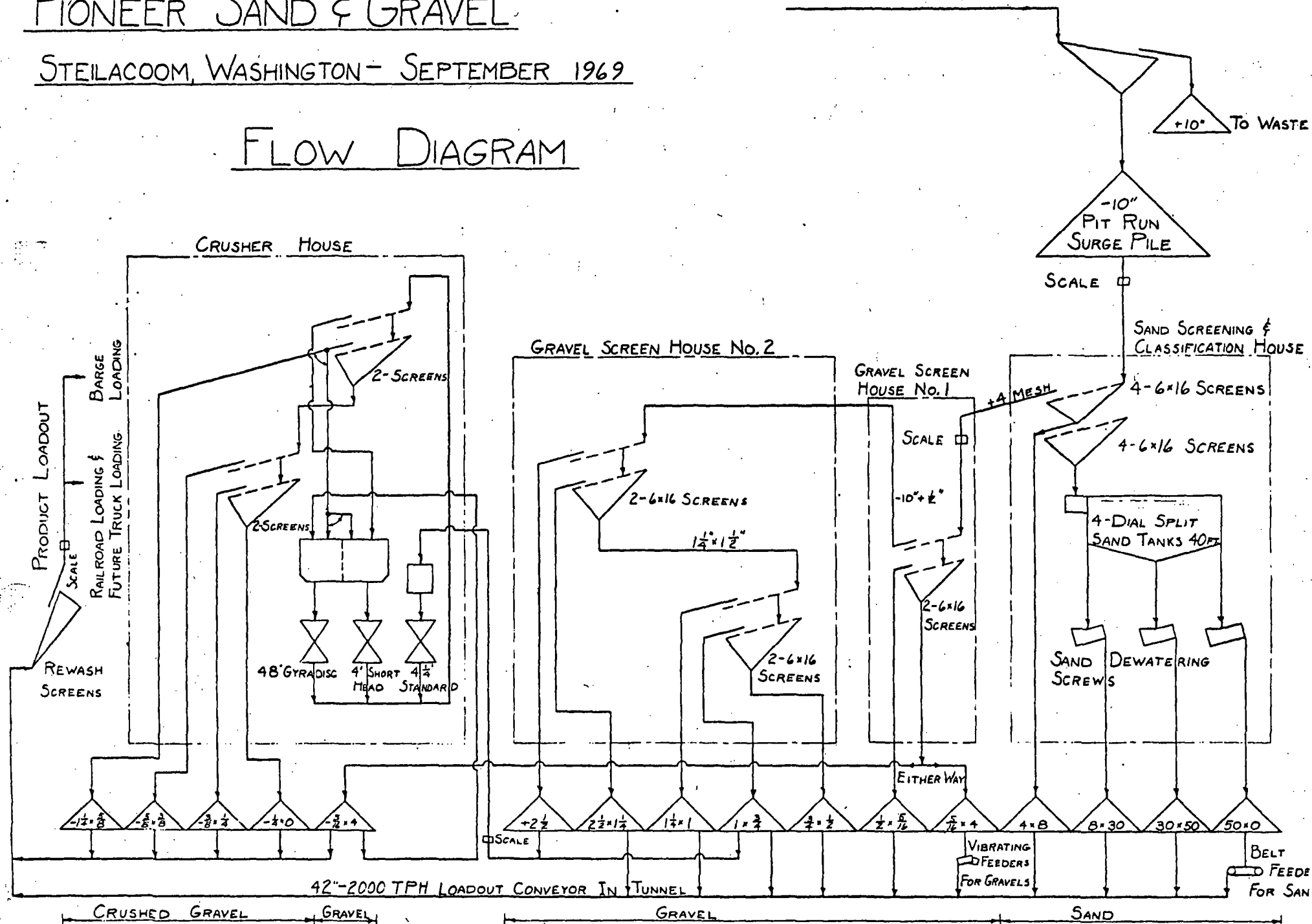
Attachments

cc: Chief-Enforcement
Supervising Air Pollution Inspector - Pierce-Kitsap Counties



STEILACOOM, WASHINGTON - SEPTEMBER 1969

DRAGLINE.
PIT LOADING



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